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ABSTRACT

Career planning is crucial to the employability of mildly mentally retarded junior high school graduates. Previous research has shown the feasibility of vocational education for mildly mentally retarded junior high school graduates studying at vocational high schools. A study investigated the planning details of vocational education for mildly mentally retarded junior high school graduates in Taiwan. Major concerns for the planning were as follows: the status of the mildly mentally retarded population, the implementation methods, special education for vocational teachers, curriculum and facility, class size, and qualification standards for selecting the experimental vocational high schools. Conference discussions and the Delphi technique were used to collect data. More than 100 experts in vocational education were invited to participate in the conference discussions and 43 experts were involved in the Delphi process. The study found that the potential number of junior high school graduates to enter vocational high schools was about 1,000 and that appropriate implementation methods included resource classrooms, special classes, and vocational extension classes. Special vocational teachers need on-the-job training in special education before the program can be implemented and vocational teacher education programs should be designed to accomplish the educational goals set for mildly mentally retarded students. The results of the study also indicated that appropriate class size should range from 10-20 students. Qualification standards for selecting the experimental vocational schools included teachers' acceptance of the program, school effectiveness, accommodation capacity, and location. Based on the findings, recommendations for student career planning, application procedures, curriculum design, program implementation, finance, and further research were made. (Contains 11 references.) (Author/KC)

A Study of the Planning of Vocational Education at Vocational High Schools for Mildly Mentally Retarded Junior High School Graduates in Taiwan, Republic of China

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A Study of the Planning of Vocational Education at Vocational High Schools for Mildly Mentally Retarded Junior High School Graduates in Taiwan, Republic of China

Robert T.Y.Wu

Abstract

Career planning is crucial to the employability of mildly mentally retarded (MMR) junior high school graduates. Theoretically, their education at junior schools usually emphasizes practical daily life skills as well as career exploration activities. Upon their graduation from these schools, they have to move to the career preparation stage in order to gain necessary salable skills for employment. Previous research showed the feasibility of vocational education for MMR junior high school graduates studying at vocational high schools.

The purpose of this study was to investigate the planning details of vocational education for MMR junior high school graduates in Taiwan. Major concerns for the planning included the status of the MMR population, the implementation methods, special education for vocational teachers, curriculum and facility, class size, and qualification standards for selecting the experimental vocational high schools. Conference discussions and the Delphi Technique were used to collect data. More than one hundred experts in vocational education were invited to participate in the conference discussions and forty three experts were involved in the Delphi process. Statistical techniques employed in this study included percentage, mean, standard deviation, and ANOVA.

Findings indicated that the potential number of the junior high school graduates to enter vocational high schools was around 1,000 and that the appropriate implementation methods included resource classroom, special class, and vocational extension class. Special vocational teachers needed on-the-job training in special education before the program would be implemented. In the long run, vocational teacher education programs should be designed to accomplish the educational goals set for MMR students. The results of the study also indicated that appropriate class size should range from 10-20 students. Qualification standards for selecting the experimental vocational schools included teachers' acceptance of the program, school effectiveness, accommodation capacity, and location. Based on the findings, recommendations for student career planning, application procedure, curriculum design, program implementation, finance, and further studies were provided.

Keywords: vocational high school, mildly mentally retarded students educational opportunity

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From the viewpoint of career education, the final goals of education for mentally retarded (MR) students are to prepare these students for gainful employment and to educate them to be "total" individuals by developing their potential. According to the national constitution, people should have equal educational opportunities. Through career awareness, exploration, and preparation in the educational system in Taiwan, especially in the vocational education and training system, mentally retarded high school graduates were able to succeed in their chosen careers and become independent individuals in the society (Brolin, 1982, Hasazi, Gordon, Roe, Hull, Finck, & Salemlier, 1985, Keirk, 1972, & Shui, 1985). On the other hand, some studies showed most of the MR individuals had semi-skilled or unskilled jobs (Crain, 1980, Chen, 1984, Shui, 1985). Along the same line, Brolin (1976) developed the Competeney-based Careers Education Curriculum for MR students. It emphasized four learning categories: daily living skills, occupational guidance and preparation, personal-social skills, and academic skills.

Furthermore, Yang's (1990) study indicated that mentally retarded junior high school graduates needed occupational skills in order to enter the job market. Therefore, vocational education at vocational high schools has become instrumental and crucial to the employment of the future mentally retarded junior high school graduates in Taiwan, especially to the mildly mentally retarded (MMR) students. Students with mild mental retardation are those with impaired intellectual and adaptive behaviors and chose development reflects a reduced rate of learning (Henley, Ranssey, & Alogozzine, 1993). In Taiwan, according to the findings of a committee organized by the Ministry of Education, there were 2,403 students classified as mildly mentaly retarded students in 1992. By 1994 and 1995, each year there would be around 1,000 students who are ready to enter high schools (Ministry of Education, 1994). Due to the mild nature of their learning problems and the large group size of the students, it is important to provide vocational education as one of their educational alternatives.

Most of the educators of vocational education and special education believe that vocational education at the high school level is effective in educating these junior high school graduates (Morrissey, 1993). In order to implement the policy, this project was conducted to study the planning details of the education.

Purpose of the Study

The purpose of this study was to explore the planning details of vocational education at vocational high schools for mildly mentally retarded junior high school graduates. It includes the dispersion status of the MMR junior high school students, type of vocational education for MMR students, curriculum and facility, class size, and the qualifications for experimental vocational high schools. The following research questions were addressed in the study

1. What is the dispersion status of the MMR junior high school students?
2. What is the most appropriate implementation type of vocational education for the MMR junior high school graduates?
3. How should vocational special education teachers be prepared?
4. What kinds of curriculum and facility are suitable for the education of the MMR students?
5. What is the proper class size?
6. What are the qualifications necessary for nexperimental vocational high schools?

Methodology

Population and Sample

The population consisted of all vocational educators and special educators, administrators, vocational high school principals and teachers, and junior high school teachers teaching MR students. Because this research required representative subjects with both vocational education and special education background, a total of 43 experts were drawn from this population including 10 vocational educators and special educators, 5 administrators, 12 vocational high school principals and teachers, and 16 junior high school teachers teaching MR students.

Data Collection and Instrumentation

In order to answer all the research questions, the Delphi Technique, literature review, and conference discussion were employed. The

questionnaire for the Delphi Technique consisted of two parts. The demographic part included 4 questions related to sex, educational background, highest educational credential, and job position. The second part of the questionnaire was grouped to 15 items related to the dispersion status of the MMR junior high school students, type of vocational education for MMR students, teacher education for special vocational teachers, curriculum and facility, class size, and the qualifications for experimental vocational high schools.

In order to estimate the potential student population and its dispersion status for the designed vocational education programs, the reviewed literature was basically governmental statistical documents. More than one hundred experts participated in three conference discussions to reach a consensus on the research topics. The results of the governmental documents, the Delphi proceeses, and the conference discussions formed the findings of this study. Statistical techniques employed in this study included, percentage, mean, standard deviation and one-way ANOVA.

Findings

This study utilized the methods of the Delphi Technique, literature review, and conference discussion for analyzing the research questions. The combined findings of the study were organized and reported as they related to these questions.

The potential MMR student population and their dispersion status were found from the data provided by the Ministry of Education. In total, there were 2,403 seventh and eighth graders in the junior high schools in 1992. By 1994 and 1995, each year there would be around 1,000 MMR students who needed such educational services. Moreover, for the northern, middle, southern, and eastern areas of Taiwan, the potential student numbers were 771, 682, 729, and 221 respectively.

The analysis of variance used to test for differences in implementing methods among groups of teachers with different educational background and with different job positions showed only few significant differences in opinions on implementing method, and class size at the .01 level (see Table 1, Table 2, Table 3, and Table 4). In summary, possible implementing methods of vocational education for MMR junior high school graduates included resource classroom, special class, and vocational extension class. The screening procedures for

selecting the MMR students to join in the experimental vocational education programs should he decided by individual school committees The time span for graduation normally is three years However, depending on the situation, it should be more flexible for these students

Workshops and intensive courses needed to be offered for the vocatoinal teachers who were involved in educating the MMR students With special education background, vocational teachers would do the jobs more effectively and efficiently In addition to vocational education, a second major in special education for vocational teachers was also recommended

For "curriculum and facility", because MMR students' cognitive abilities usually were lower than those of the normal students, the regular curriculum needed to be revised according to job requirements and their learning abilities Facilities needed to be adjusted for safety and hygiene purposes

The proper class size of the experimental vocational programs ranged from 10 to 20 students no matter which implementing method was taken because of the flexibility of size The final research question dealt with the qualifications for experimental vocational high schools Due to the lack of professional knowbedge in mental retardation, vocational teachers and administoators at vocational high schools were reluctant to provide such services to the MMR students In order to facilitate the implementation of the programs, the participants agreed on the following qualifications for experimental vocational high schools

1 School personnel had high educational motivation
2 Adminstrators possessed special needs education competencies
3 Vocational teachers had teaching intention, and special needs education experience
4 Curriculum were functional and met the future job market requirements
5 Necessary adjustments of the teaching facility should be made to assure students' effective learning
6 School locations were considered to be appropriate
7 Private vocational schools with teaching effectiveness records could participte in the programs

Conclusions and Recommendations

Based on the findings of this study, the following conclusions are drawn

1. Approximately 1,000 MMR students will enter vocational high schools each year in 1994 and 1995
2. Possible implementing methods of vocational education for the MMR students appear to be resource classroom, special class, and vocational extension class
3. Vocational teachers at vocational high schools need workshops and up to twenty credits of intensive special education courses in order to teach those students. In the long run, a second major in special education for vocational teachers was recommended
4. The curriculum needs to be organized in a way to include daily life skills as well as job skills
5. To consider the related special education regulations and individual learning differences, proper class size should range from 10 to 20 students
6. The qualifications for experimental vocational schools need to include personnel with high educational motivation, special needs experience, revised school curriculum, adjusted facility, appropriate school location, and effective school running records

The following recommendations are based on the findings and conclusions

1. The MMR junior high school graduates should be given more educational opportunities in order to be independent in daily life as well as careers. At vocational high schools, there are three implementing educational methods, i.e., the resource classroom, the special class, and the vocational extension class. Students can choose among these methods
2. In order to better serve these MMR students, the application procedures for entering vocational high schools need to be simplified through the function of a special vocational education committee
3. The curriculum based on the resource classroom concept should emphasize some important learning areas. While the vocational extension classes need to stress practical technical

skills. Special classes at the vocational high schools need to have revised curriculum according to students' learning pace and effectiveness. At present, special classes seem to be more feasible than the other two educational methods.

4. The government needs to select several experimental vocational high schools in the northern, middle, southern, and eastern areas of Taiwan by consulting the dispersion status of the MMR students. Class size should range from 10 to 20 students.
5. Workshops and intensive courses in special education should be required for competent vocational teachers.
6. Most experimental costs should be supported directly by the Ministry of Education.
7. Further studies include curriculum development, organization of teaching materials, budget, inservice training in speccial education, and the coordination within vocational high schools.

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Table 1

Analysis of Variance Summaries of Implementing Methods Among Groups of Teachers with Different Educational Background

Implementing Method		Educational Background			F
		Special Education	Vocational Education	Others	
Special Class	$\bar{X}$	3.67	4.11	4.10	7*
	(SD)	(.85)	(.60)	(.91)	
Resource Classroom	$\bar{X}$	4.00	3.44	3.75	3.33
	(SD)	(.86)	(1.09)	(.70)	
Vocational Extension Class	$\bar{X}$	4.00	4.22	3.81	3.96*
	(SD)	(.53)	(.63)	(.40)	

n 43 *P .05

Table 2

Analysis of Variance Summaries of Implementing Methods Among Groups of Teachers with Different Job Postions

Implementing Method		Job Positions					F
		College Faculty (SE)	College Faculty (VE)	Vocational Teacher (SE)	Special Education Teacher (VE)	Administrative	
Special Class	$\bar{X}$	4.00	4.00	4.28	3.85	4.00	86
	(SD)	(.00)	(.00)	(.48)	(.37)	(.63)	
Resource Classroom	$\bar{X}$	4.33	3.25	3.67	3.71	4.25	.97
	(SD)	(.57)	(.95)	(.99)	(.75)	(.95)	
Vocational Extension Class	$\bar{X}$	4.00	3.00	4.28	3.87	4.16	3.10
	(SD)	(.00)	(.81)	(.75)	(.35)	(.40)	

Note a SE refers to Special education b VE refers to vocational education

n 43 *P .05

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Table 3

Analysis of Variance Summaries of Class Size Among Groups of Teachers with Educational Background

Implementing Method		Educational Background			
		Special Education	Vocational Education	Others	F
8-15 Students	$\bar{X}$	4.25	4.11	4.20	.17
	(SD)	(.46)	(.60)	(.42)	
10-20 Students	$\bar{X}$	3.42	2.50	3.11	3.36*
	(SD)	(.78)	(.75)	(.60)	
20-30 Students	$\bar{X}$	2.14	1.75	1.50	1.86
	(SD)	(.69)	(.70)	(.53)	

n=43 *P<.05

Table 4

Analysis of Variance Summaries of Class Size Among Groups of Teachers with Different Job Positions

Implementing Method		Job Position					
		College fact (SE)	College Faculty (VE)	Vocational Teacher (SE)	Special Education Teacher (VE)	Administrator	F
8-15 Students	$\bar{X}$	4.00	4.25	4.25	4.12	4.20	.33
	(SD)	(.50)	(.50)	(.46)	(.35)	(.83)	
10-20 Students	$\bar{X}$	3.00	2.33	2.57	3.25	3.75	2.72
	(SD)	(.00)	(.57)	(.78)	(.70)	(.50)	
20-30 Students	$\bar{X}$	1.50	2.00	1.42	2.00	2.00	.93
	(SD)	(.70)	(1.00)	(.53)	(.57)	(.81)	

Note: a SE refers to Special education; b VE refers to vocational education

n=43 *P<.05

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